Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A ceramic member being usable in a state where at least a part thereof is exposed in a reactor in which halogen plasma is generated, comprising:

a base member containing a first ceramic material as a main component; and

a coating layer on a surface of the base member, ~~the~~said surface ~~of the base member facing~~being adapted to face an inside of ~~the~~a reactor, ~~and~~ the coating layer containing a second ceramic material more resistant to plasma etching than the first ceramic material as a main component,

wherein the coating layer includes a thick portion in a region where an etching rate of the coating layer by the halogen plasma is locally high, and a thickness (tt) of the thick portion and a thickness (tn) of a normal thickness portion other than the thick portion satisfy the following expression (1):

$$tn < tt \leq (Ee/En) \times tn \quad \text{..... (1)}$$

where En: etching rate of the coating layer in the normal thickness portion; and

Ee: etching rate of the coating layer in the thick portion.

2. (Currently Amended) A ceramic member being usable in a state where at least a part thereof is exposed in a reactor in which halogen plasma is generated, comprising:

a base member containing a first ceramic material as a main component; and

a coating layer on a surface of the base member, ~~the~~said surface ~~of the base member facing~~being adapted to face an inside of ~~the~~a reactor, ~~and~~ the coating layer containing a second ceramic material more resistant to plasma etching than the first ceramic material as a main component,

wherein the coating layer locally includes a thick portion, and a thickness (tt) of the thick portion and a thickness (tn) of a normal thickness portion other than the thick portion satisfy the following expression (2):

$$tn < tt \leq 3 \times tn \quad \text{.....(2).}$$

3. (Original) The ceramic member according to claim 1, wherein the thickness (tt) of the thick portion is 8 mm or less, and the thickness (tn) of the normal thickness portion is 5 mm or less.

4. (Original) The ceramic member according to claim 1, wherein a surface area of the coating layer is 1×10^6 mm^2 or less, and the thickness (tt) of the thick portion is 1.5 mm or less.

5. (Original) The ceramic member according to claim 1, wherein a surface area of the coating layer is 5×10^5 mm^2 or less, and the thickness (tt) of the thick portion is 3 mm or less.

6. (Original) The ceramic member according to claim 1, wherein a surface area of the coating layer is 1×10^5 mm^2 or less, and the thickness (tt) of the thick portion is 6 mm or less.

7. (Original) The ceramic member according to claim 1, wherein the first ceramic material is alumina.

8. (Original) The ceramic member according to claim 1, wherein the second ceramic material is any of yttria and a composite oxide containing yttria and aluminum.

9. (Original) The ceramic member according to claim 1, wherein the first ceramic material is at least one material selected from the group consisting of silicon nitride, aluminum nitride and silicon carbide.

10. (Original) The ceramic member according to claim 1, wherein the second ceramic material is diamond.

11. (Original) The ceramic member according to claim 1, wherein the second ceramic material is alkaline-earth fluoride.

12. (Original) The ceramic member according to claim 1, wherein the ceramic member is a member composing an inner wall of the reactor of plasma treatment apparatus.

13. (Original) The ceramic member according to claim 1, wherein the thick portion is formed on the coating layer close to a position where an electrode for generating the plasma is disposed.

14. (Original) The ceramic member according to claim 1, wherein the base member has a substantially even thickness.

15. (Original) The ceramic member according to claim 1, wherein the base member locally includes a concave portion on the surface where the coating layer is formed, and the thick portion of the coating layer is formed to coat the concave portion.

16. (Original) The ceramic member according to claim 1, wherein the coating layer is one formed by use of a plasma flame spraying method.

17. (Original) The ceramic member according to claim 1, wherein the base member and the coating layer are an integrally sintered body formed by use of a gel casting method and then fired integrally.

18. (New) An apparatus comprising:

a reactor adapted to contain a halogen plasma; and

a ceramic member comprising a base member containing a first ceramic material as a main component and a coating layer on a surface of said base member, said coating layer containing a second ceramic material more resistant to plasma etching than the first ceramic material as a main component,

wherein said ceramic member is associated with said reactor such that at least said coating layer is exposed to an inside of said reactor, and

wherein said coating layer includes a thick portion in a region where an etching rate of said coating layer by the halogen plasma is locally high, and a thickness (tt) of the thick portion and a thickness (tn) of a normal thickness portion other than the thick portion satisfy the following expression (1):

$$tn < tt \leq (Ee/En) \times tn \quad \text{..... (1)}$$

where En: etching rate of the coating layer in the normal thickness portion; and

Ee: etching rate of the coating layer in the thick portion.

19. (New) An apparatus comprising:

a reactor adapted to contain a halogen plasma; and

a ceramic member comprising a base member containing a first ceramic material as a main component and a coating layer on a surface of said base member, said coating layer containing a second ceramic material more resistant to plasma etching than the first ceramic material as a main component,

wherein said ceramic member is associated with said reactor such that at least said coating layer is exposed to an inside of said reactor, and

wherein said coating layer locally includes a thick portion, and a thickness (tt) of the thick portion and a thickness (tn) of a normal thickness portion other than the thick portion satisfy the following expression (2):

$$tn < tt \leq 3 \times tn \quad \text{..... (2).}$$